

## **NOTICE OF REASON FOR REJECTION**

Dispatch Date : December 2, 2008

Japanese Patent Application Number : No. 2003-295614

Drafting Date : November 20, 2008

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Applied Provision : Section 29(2)

This application should be refused for the reason mentioned below. If the applicant has any argument against the reason, such argument should be submitted within 60 days from the date on which this notification was dispatched.

### **REASON(S)**

The invention(s) in the claim listed below of the subject application should not be granted a patent under the provision of Patent Law Section 29(2) since it could have easily been made by persons who have common knowledge in the technical field to which the invention(s) pertains, on the basis of invention(s) described in the publication(s) listed below which was distributed, or invention(s) made accessible to public through electric telecommunication line, in Japan or foreign countries prior to the filing of the subject application.

**Reference [Refer to the list of Cited Reference(s).]**

**Cited Reference(s)**

1. Hiroyasu Sano, Nobuhisa Kataoka, Hiroshi Kubo and Makoto Miyake, "Multicarrier CDMA Scheme with Spreading in Time and Frequency Domains", 2000 Proceeding of the Society Conference of IEICE 1, Sep. 7, 2000 (p378)
2. Kazuaki Tsukakoshi and Yukiyoshi Kamio, "Performance of MC-CDMA Adaptive Data-modulation System in Fading-channel Environment", Technical report of IEICE, The Institute of Electronics, Information and Communication Engineers Japan, Nov. 13, 2001, Vol.101, No.437, pp7-12

(Attention) Due to restriction of the law, the contract, or the like, part of or all of the proposed non-patent documents may not be deliverable.

Reason A:

Claims: 1, 2, 5, 7, 8, 11, 13-15

Reference: 1

Remarks:

The cited document 1 describes an MC-CDMA scheme of performing time/frequency diffusion, where the diffusion rate is determined in view of the characteristics of the transmission path (signal power of carrier is also illustrated). The frequency diffusion is a method that takes into consideration frequency selectivity fading (i.e., drop). Furthermore, the cited document 1 also takes into consideration the orthogonality of the diffusion code, where arrangement in the time axis direction also becomes possible when orthogonality is required since "one" can be selected for the frequency diffusion rate.

Since selecting the modulation method for every data type in the multicarrier transmission is a general method in hierarchical modulation and the like, selecting the diffusion rate described in the cited document 1 according to the condition required for every data type can be easily contrived by those skilled in the art. In this case, it is recognized that the data requiring orthogonality is arranged in the time axis direction,

and arrangement that requires diffusion in the frequency direction is realized when reception quality without drop is required.

On the reception side, it is recognized that the process opposite to the transmission side is, of course, carried out.

Therefore, the invention related to each claim of the subject invention is recognized as being easily contrived by those skilled in the art from the cited document 1.

Claims: 4, 6, 10, 12

References: 1, 2

Remarks:

An adaptive modulation system is a commonly used means, and is generally used in the MC-CDAM (see cited document 2 etc. Although the coding ratio is not described in the cited document 2, change of the coding ratio is also a commonly used means, and is recognized as merely one embodied example of adaptive modulation).

<Claims not found with reason for refusal>

Regarding the invention claimed in claim 9, no reason for refusal is found at present. If any new reason for refusal is found in future, a further notice will be issued.

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